Japanese Journal of Ichthyology
Vol. XIII, Nos. 1/3
July 30, 1965

魚類学雑誌
第13巻 第1/3号
1965年7月30日発行

# Description of a New Alepocephalid Fish from Suruga Bay*

Tokiharu ABE, Ryuzo MARUMO and Kouichi KAWAGUCHI

An example of alepocephalid fish recently collected by the research vessel "Tansei-maru" is believed to represent a new species. The present authors express here their sincere thanks to Prof. Yoshiyuki MATSUE, Director of the Ocean Research Institute, University of Tokyo, for the opportunity to report upon this new species, and to the Japanese Society for the Promotion of Science for the partial financial support of this study through a grant from this society as a part of the Japan-U. S. Science Cooperative Program.

*Leptoderma lubricum*, new species

Namera-iwashi, new Japanese name

Figs. 1-4

*Study material.* Only the holotype, Cat. No. 642, Ocean Research Institute, University of Tokyo, has been available. Total length *ca.* 225 mm., standard length 210 mm. Taken with a large plankton net in an oblique haul between 0 and 1300 m. (1700 m. wire out), at Station 67-7 (34° 52 N ; 138° 48 E), in Suruga Bay, 5:30 a. m.—6:25 a. m., August 16, 1964. ♀. Diameter of largest eggs *ca.* 2.5 mm. They are deep yellow.

*Distinctive characters.* The dorsal and anal fins (as in *Xenodermichthys*) are each divided into two portions, the posterior portion of each fin being confluent with the caudal fin.

*Description.* The naked body is long, subcylindrical anteriorly and compressed posteriorly. There is a weak mid-ventral prepelvic keel which ends anteriorly below the 4th gill-arch. The length of the head is about a quarter of the standard length, and the greatest depth of body (just in front of the pectoral bases) is about a sixth of the standard length. The specimen was first preserved in formalin and later transferred to diluted ethyl alcohol which caused shrinkage. The mouth is fully opened, the hind portion of the maxillary being situated anterior to the joint of the premaxillaries. The origin of the dorsal fin is above the 14th fin-ray of the anal, and a little nearer to the pectoral base than to the base of the caudal fin, the predorsal length being 59% of the standard length. The origin of the anal fin is situated about midway between the snout tip and the base of the candal fin. The distance from the hind end of the operculum to the pelvic origin is slightly less than the head length. The pelvic fins are small, but their tips nearly reach the anal origin. The pectoral fin on either side is longer than the pelvic fin, and placed fairly high, the center of

* Contribution No. 50 from the Ocean Research Institute, University of Tokyo.

its base being at the level of the dorsal corner of the gill-opening. The eye is large, directed outward and slightly upward. The horizontal diameter of the orbit is nearly equal to the snout length and the post-ocular length of the head. The dorsal margin of the eye is in line with the dorsal profile of the head. The depth of the subocular part of the head is slightly less than a half of the vertical diameter of the eye. The pupil is large, the horizontal diameter being a little larger than the width of the flat bony interorbital area (measured above eye-centers).

The gill-membranes are free from one another; the right membrane is connected with the triangular short exposed portion of the isthmus below the posterior rim of the orbit, and the left membrane laps just a little over the right one near the mid-ventral line and in front of the connection of the right membrane with the isthmus. Gills 4; a slit behind the 4th gill-arch. The number of branchiostegals 5 on either side. The interoperculum is provided with a median horizontal ridge, and may be confused with a branchiostegal if the skin is not removed. On the lst gill-arch, the gill-lamellae are much shorter than the gill-rakers which number 1+15 (l) and 1+15+i (r). The pseudobranchiae are very small. The nostrils are large. The anterior nostril is smaller than, and dorsal to, the posterior one. They are much nearer to the eye than to the snout tip.

D. 37+23. At the blank of the dorsal fin two neural spines are free of dorsal fin-rays and their radials.

A. 51+20. At the blank of the anal fin one haemal spine is free of anal fin-rays and their radials.

P. *ca.* 7 (left & right).

V. *ca.* 5 (left & right).

C. 9+8. Upper and lower lobes slightly produced.

Total number of vertebrae 74 (=17+59). Number of black papillae resembling *Dolopichthys*-type (REGAN & TREWAVAS, 1932) along lateral line counted from the one postero-dorsal to the upper corner of gill-opening 70 (left) & 68 (right). There are 4 similar papillae on each side of the mid-dorsal line, the anteriormost being situated above pectoral base; another similar papilla is situated antero-dorsal to the anteriormost papilla of lateral line; similar but smaller papillae are arranged in a row on either side of interorbital area. This row is internal to a row of 3 fairly large supraorbital pores. There is a smaller anterior and a posterior nasal pore above nostrils on either side. Between the infraorbital row of pores (altogether *ca.* 10 in number) and the preoperculo-mandibular row of pores (*ca.* 9 in number) is a short row of small papillae. On either side, along the boundary of the muscular back and the bony head is a short row of papillae which [redacted], however, does not extend inwards (unlike *Leptoderma macrops* illustrated by TUCKER, 1954, text-fig. 13). There are several small papillae and a pore above the operculum on either side.

Teeth are present on the premaxillaries and dentaries, minute, conical, well sepa-

rated from each other, and arranged in a single row. There are smaller tubercles (some of them are tooth-like) behind the row of teeth of each jaw.

The supramaxillary is single, and nearly S-shaped.

The color in alcohol is brownish everywhere excepting for bluish places where the outermost brown covering has been rubbed off. The lining of the buccal and branchial cavities, peritoneum, and the covering of the posterior half of the stomach and the fairly large intestine are blackish.

*Relationships.* Leaving the discussion of the systematic position of the genus *Leptoderma* for fufure work, the auhors may state here that the present new species is nearer to *L. affinis* ALCOCK, 1899, than to *L. macrops* VAILLANT, 1888, and *L. retropinna* FOWLER, 1943, in the nature of the so-called "laterl-line". *L. springeri* MEAD & BÖHLKE, 1953, seems to be nearer to the present species than to *retropinna* in the position of the dorsal origin, but nothing is known of the "lateral-line" of *springeri* which, unlike the present new species, has toothed maxillaries.

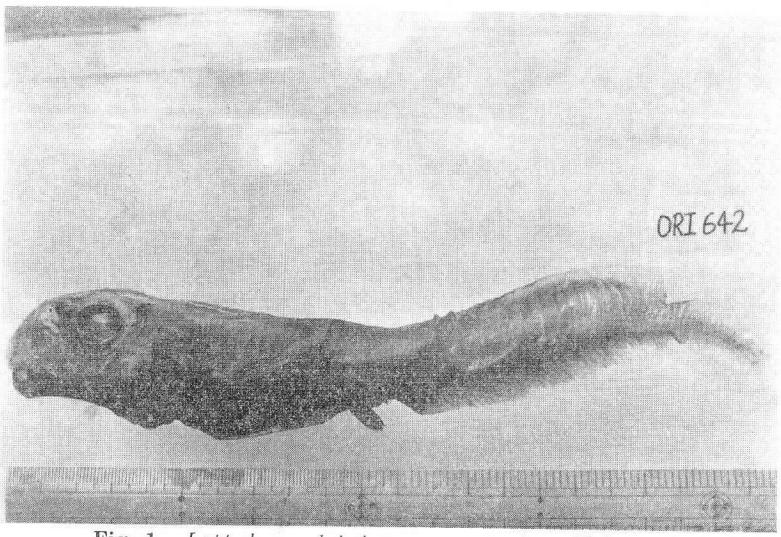


**Fig. 1.** *Leptoderma lubricum*, new species. Holotype.

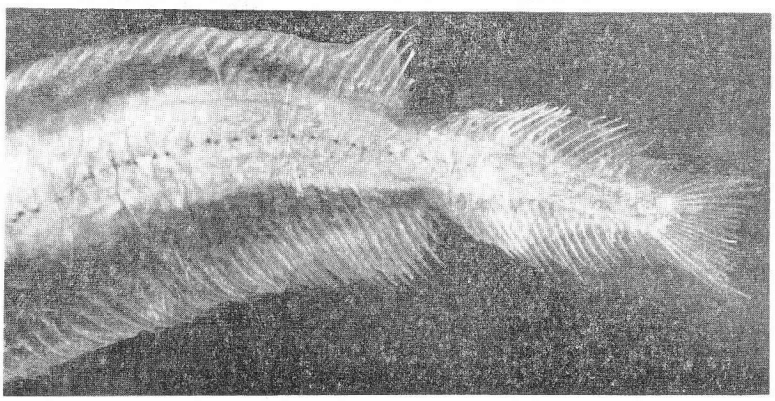

**Fig. 2.** Explanation same as in fig. 1.

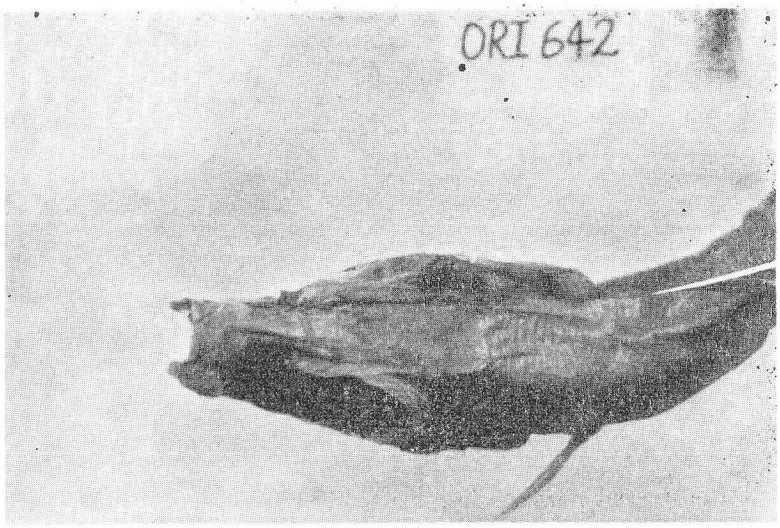


**Fig. 3.** Explanation same as in fig. 1.

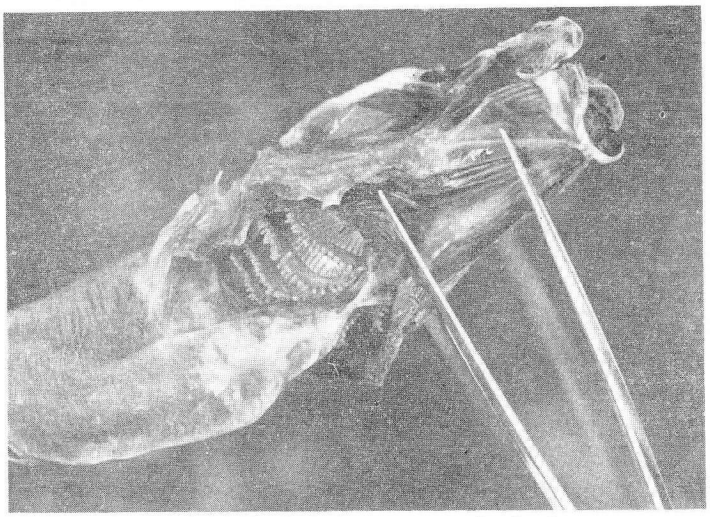

**Fig. 4.** Explanation same as in fig. 1.

## References

In addition to the publications cited by Drs. G. W. MEAD & J. BÖHLKE, 1953 (*Leptoderma springeri*, a new alepocephalid fish from the Gulf of Mexico. Texas Journ. Sci., 1953, no. 2, pp. 265-267), the following have been consulted:

BRANSON, B. A. & MOORE, G. A. 1962. The lateralis components of the acoustico-lateralis system in the sunfish family Centrarchidae. Copeia, 1962, no. 1, pp. 1-108.

DISLER, N. N. 1960. Organui tchuvstv sistemui bokoboi i lini ikh znatchenie u povedenii ruib. 310 pp. Moscow. In Russian.

REGAN, C. T. & TREWAVAS, E. 1932. The Carlsberg Foundation's Oceanogr.....Rep. no. 2. Deep-sea angler-fishes (*Ceratioidea*). 113 pp., 10 pls. Copenhagen.

TUCKER, D. W. 1954. The "Rosaura" Expedition 1937-1938. 4. Report on the fishes collected by S. Y. "Rosaura" in the North and Central Atlantic, 1937-38. Pt. I. Bull. Brit. Mus. (N. H.), Zool., vol. ii, no. 5, pp. 163-214, pls. 7 & 8.